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CENTER FOR HEALTH POLICY

INDIANA UNIVERSITY
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SCHOOL OF PUBLIC HEALTH

research brief

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Drug Use in Indiana: A Regional Perspective

Summary

- Indiana consists of 92 counties, which are aggregated by FSSA into 8 service regions.
- The prevalence of substance misuse can differ between the individual regions.
- Compared to the state's average, rates of underage drinking, smoking, and illicit drug use were particularly high in Indiana's Western region.
- The most frequently used substances among Indiana students in grades 8, 10, and 12 were alcohol, electronic vape products, marijuana, traditional (combustible) cigarettes, and prescription drugs.
- Substance misuse is a public health concern, affecting a variety of populations. In addition to differences in alcohol and drug use by age groups, there are also regional variations.
- Understanding each region's unique needs is a vital component to designing programs dedicated to improving overall Hoosier health.

Introduction

Substance abuse refers to the misuse of mind- and behavior-altering substances, including alcohol, illegal drugs, and some prescription medications. Substance use disorders (SUDs) are treated as mental health problems, as they affect an individual's normal desires and priorities [1]. SUDs occur when the recurrent use of drugs or alcohol causes "clinically or functionally significant impairment, such as health problems, disability, and failure to meet major responsibilities at work, school, or home" [2]. SUDs can be categorized as mild, moderate, or severe, depending on the number of diagnostic criteria the individual meets. Common SUDs include alcohol use disorder, tobacco use disorder, cannabis use disorder,

stimulant use disorder, hallucinogen use disorder and opioid use disorder [1]. SUDs often co-occur with other mental illnesses [1].

The purpose of this issue brief is to identify prevalence rates of substance misuse in the state of Indiana and its 8 regions. Understanding each region's unique needs is a vital component to designing programs dedicated to improving overall Hoosier health. This brief will utilize multiple data sources in order to provide a more comprehensive overview of the current state of substance use in Indiana.



Background

The state consists of 92 counties, which are aggregated by Indiana's Family and Social Services Administration (FSSA) into 8 service regions (Table 1).

Table 1: Indiana service regions

Region	Counties
Central	Boone, Hamilton, Hancock, Hendricks, Johnson, Marion, Morgan and Shelby
East	Blackford, Delaware, Fayette, Grant, Henry, Jay, Madison, Randolph, Rush, Union and Wayne
North Central	Cass, Elkhart, Fulton, Kosciusko, La Porte, Marshall, Miami, St. Joseph, Tipton, and Wabash
Northeast	Adams, Allen, De Kalb, Huntington, LaGrange, Noble, Steuben, Wells, and Whitley
Northwest	Jasper, Lake, Newton, Porter, Pulaski, and Starke
West	Benton, Carroll, Clay, Clinton, Fountain, Monroe, Montgomery, Owen, Parke, Putnam, Sullivan, Tippecanoe, Vermillion, Vigo, Warren, and White
Southeast	Brown, Bartholomew, Decatur, Franklin, Lawrence, Jackson, Jennings, Ripley, Dearborn, Orange, Washington, Scott, Jefferson, Ohio, Switzerland, Crawford, Clark, Harrison, and Floyd
Southwest	Greene, Knox, Daviess, Martin, Gibson, Pike, Dubois, Posey, Vanderburgh, Warrick, Spencer, and Perry

National Survey on Drug Use & Health (NSDUH)

The Substance Abuse and Mental Health Services Administration (SAMHSA) annually sponsors the National Survey on Drug Use and Health (NSDUH), which is the primary source of statistical information regarding alcohol, tobacco, and illicit drug use in the U.S. NSDUH samples the civilian, noninstitutionalized population aged 12 or older. The following state and substate estimates are annual averages based on pooled NSDUH data from 2014 to 2016 [3].

In Indiana, Half of the state's residents aged 12 and older consumed alcohol in the past month, and underage drinking in individuals aged 12 to 20 was

estimated at 21.4%. Alcohol Use Disorder (AUD), a severe form of problem drinking, was indicated in 5.8% of Hoosiers. Nearly 30% of Indiana residents aged 12 and older used a tobacco product in the past month and 24.4% smoked cigarettes. Marijuana use was quite prevalent with 13.8% of residents reporting past-year use and 8.9% reporting past-month use. Other illicit drug use was substantially lower; i.e., 1.2% of Hoosiers reported using cocaine and 0.4% reported using heroin in the past year [3].

Regional prevalence rates were for the most part similar to the state-level estimates. For details, see Table 1.A and 1.B.



Table 1.A: U.S. and Regional Prevalence Estimates of Alcohol and Tobacco Use in Individuals Ages 12 and older (NSDUH, 2014-2016)

Region	Past-Month Tobacco Use	Past-Month Cigarette Use	Past-Month Alcohol Use	Past-Month Underage Drinking (Ages 12-20)
United States	24.2%	19.8%	51.7%	20.8%
Midwest	27.1%	22.0%	54.6%	21.7%
Indiana	29.8%	24.4%	50.0%	21.4%
<i>Central</i>	24.0%	18.8%	52.8%	18.7%
<i>East</i>	33.6%	28.1%	43.9%	24.1%
<i>North Central</i>	31.6%	26.7%	48.3%	20.5%
<i>Northeast</i>	28.5%	23.1%	52.2%	21.2%
<i>Northwest</i>	30.1%	25.1%	51.1%	18.9%
<i>Southeast</i>	33.7%	27.1%	46.4%	19.5%
<i>Southwest</i>	31.7%	26.2%	49.7%	22.5%
<i>West</i>	34.3%	28.8%	50.8%	29.4%

Among Hoosier youth, one in five (21.4%) reported underage drinking.



Table 1.B: U.S. and Regional Prevalence Estimates of Illicit Drug Use in Individuals Ages 12 and older (NSDUH, 2014-2016)

Region	Past-Year Marijuana Use	Past-Month Marijuana Use	Past-Year Cocaine Use	Past-Year Heroin Use
United States	13.6%	8.5%	1.8%	0.3%
Midwest	12.9%	8.1%	1.4%	0.3%
Indiana	13.8%	8.9%	1.2%	0.4%
<i>Central</i>	14.3%	7.9%	1.2%	0.4%
<i>East</i>	15.9%	10.3%	1.2%	0.6%
<i>North Central</i>	11.5%	8.4%	1.1%	0.4%
<i>Northeast</i>	12.3%	8.9%	1.2%	0.4%
<i>Northwest</i>	13.3%	8.3%	1.2%	0.4%
<i>Southeast</i>	12.4%	9.1%	1.0%	0.5%
<i>Southwest</i>	12.1%	7.6%	1.0%	0.5%
<i>West</i>	18.0%	11.9%	1.5%	0.4%

Treatment Episode Data Set (TEDS)

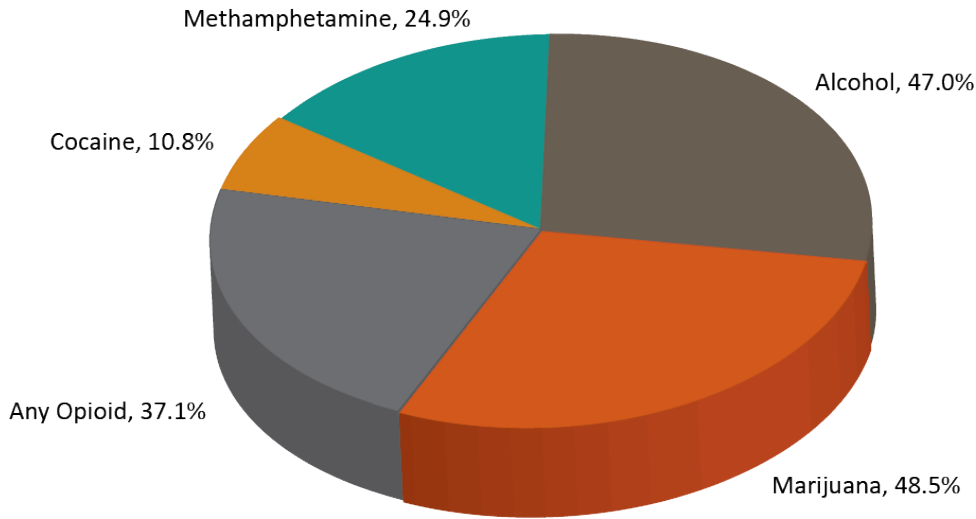
The Treatment Episode Data Set (TEDS) is a national data system that contains information on annual admissions to substance use treatment facilities. TEDS is maintained by SAMHSA and includes information on admission demographics (gender, race, age, etc.) and substance use characteristics (substances used, age at first use, route of administration, etc.). These records represent admissions rather than individuals, as a person may be admitted to treatment more than once.

In 2017, statewide data indicated that the top three substances that admitted patients reported using were marijuana (48.5%), alcohol (47.0%), and opioids (37.1%). Methamphetamine was used by 24.9% of admitted patients, and cocaine was used by 10.8% of patients (Figure 1). This was a slight variation from earlier data, which indicated that alcohol was the most commonly used substance, followed by marijuana. Regional trends tended to follow overall state trends, with a few exceptions.



Figure 1: Indiana TEDS Admissions Data of self-reported substance use (TEDS, 2017)

2017 TEDS Admissions Data



In Indiana, the percentage of admissions with reported alcohol misuse decreased from 63.2% in 2010 to 47.0% in 2017. Over this time period, the percentage of admissions in which marijuana misuse was reported decreased slightly from 49.1% to 48.5%, misuse of opioids increased from 18.6% to 37.1%, methamphetamine misuse increased from 9.7% to 24.9%, and cocaine misuse decreased from 15.8% to 10.8%.

In Central Indiana, the percentage of TEDS admissions with reported alcohol misuse decreased from 58.4% in 2010 to 43.1% in 2017. Reported marijuana misuse decreased from 47.8% to 44.9%, misuse of opioids increased from 21.8% to 39.2%, methamphetamine misuse increased from 2.7% to 16.2%, and cocaine misuse decreased from 22.1% to 21.2%.

In East Indiana, reported alcohol misuse among TEDS admissions decreased from 57.4% in 2010 to 37.8% in 2017. The percentage of admissions with reported marijuana misuse decreased slightly from 46.6% to 46.0%, misuse of opioids increased

from 23.1% to 54.4%, methamphetamine misuse increased from 2.0% to 20.4%, and cocaine misuse increased slightly from 11.3% to 11.9%.

In North Central Indiana, the percentage of admissions who reported alcohol misuse decreased from 69.7% in 2010, to 52.8% in 2017. Reported marijuana misuse decreased from 51.7% to 48.8%, opioid misuse increased from 15.5% to 32.9%, methamphetamine misuse increased from 9.3% to 22.7%. Overall, cocaine misuse decreased from 19.4% to 15.1%, and peaked in 2012, with 24.1% of admissions reporting misuse.

In Northeast Indiana, the percentage of admissions who reported alcohol misuse decreased from 76.1% in 2010, to 59.2% in 2017. Marijuana misuse decreased from 61.5% to 57.9%, misuse of opioids increased from 9.2% to 27.1%, and methamphetamine misuse increased from 11.2% to 20.0%, and cocaine misuse decreased from 18.4% to 15.7%.



In Northwest Indiana, the percentage of admissions who reported alcohol misuse decreased from 65.0% in 2010, to 53.4% in 2017. The marijuana misuse admissions decreased from 44.4% to 39.0%, misuse of opioids increased from 23.4% to 36.4%, reported methamphetamine misuse increased from 1.9% to 4.9%, and reported cocaine misuse decreased from 20.8% to 17.9%.

In Western Indiana, the percentage of admissions who reported alcohol misuse decreased from 59.2% in 2010, to 47.2% in 2017. Reported marijuana misuse increased from 47.6% to 52.2%, misuse of opioids increased from 14.0% to 30.2%, methamphetamine misuse increased from 15.3% to 35.0% and reported cocaine misuse decreased from 7.3% to 6.0%.

In Southeast Indiana, the percentage of admissions who reported alcohol misuse decreased from 51.4% in 2010, to 39.3% in 2017. Marijuana misuse increased from 38.9 to 47.4%, reported misuse of opioids increased from 25.1% to 46.6%, methamphetamine misuse increased from 12.6% to 38.2%, and reported cocaine misuse decreased from 10.7% to 5.2%.

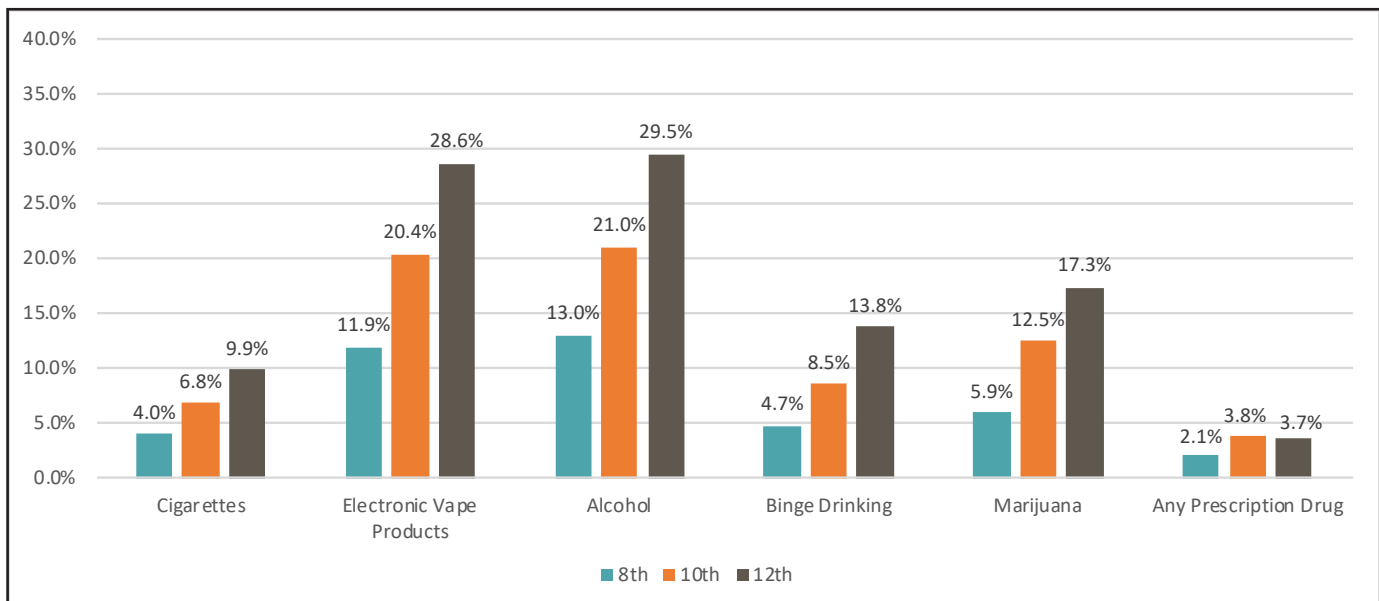
In Southwest Indiana, the percentage of admissions who reported alcohol misuse decreased from 70.6% in 2010, to 52.0% in 2017. Reported marijuana misuse decreased from 55.3% to 53.2%, misuse of opioids increased from 16.1% to 24.7%, methamphetamine misuse increased from 26.7% to 41.4% and reported cocaine misuse decreased from 8.6% to 3.4%.

Indiana Youth Survey (INYS)

The Indiana Youth Survey (INYS) is an annual school-based assessment designed to monitor patterns of alcohol, tobacco, and other drug use; gambling behaviors; and risk and protective factors among Indiana students, grades 6 through 12. The survey is conducted by the Indiana Prevention Resource Center (IPRC) and funded through the Indiana Family and Social Services Administration's Division of Mental Health and Addiction [5].

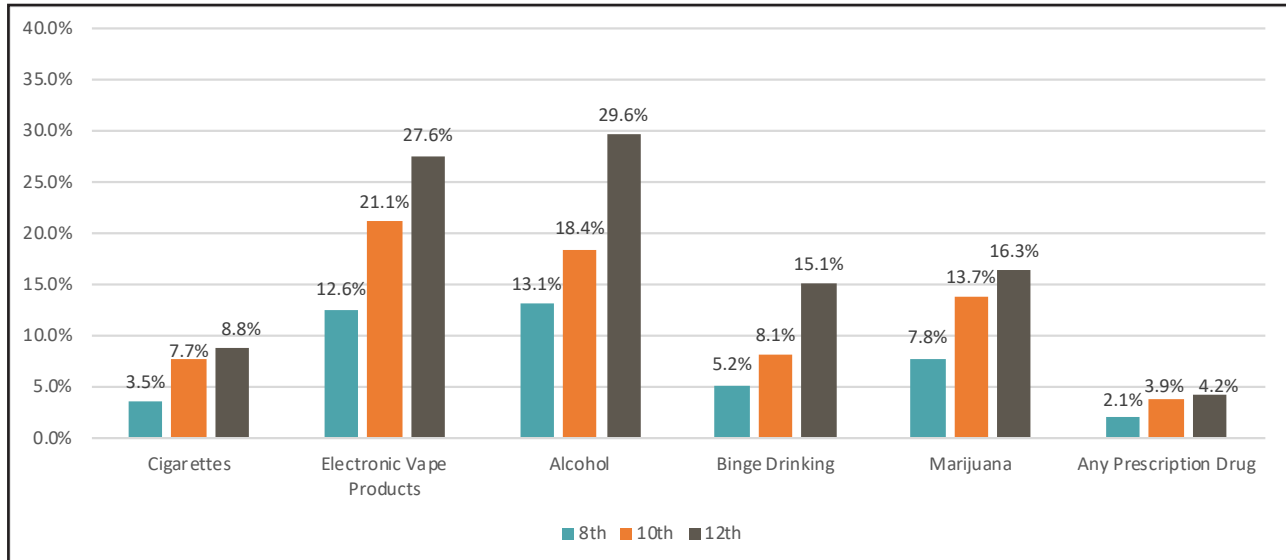
In Indiana, the substance most likely to be misused was alcohol, followed by electronic vape products and marijuana. For the most part, prevalence rates for any substance increased with higher grade levels [5].

Figure 2: Past-Month Substance Use in Indiana among 8th, 10th, and 12th graders (INYS, 2018)



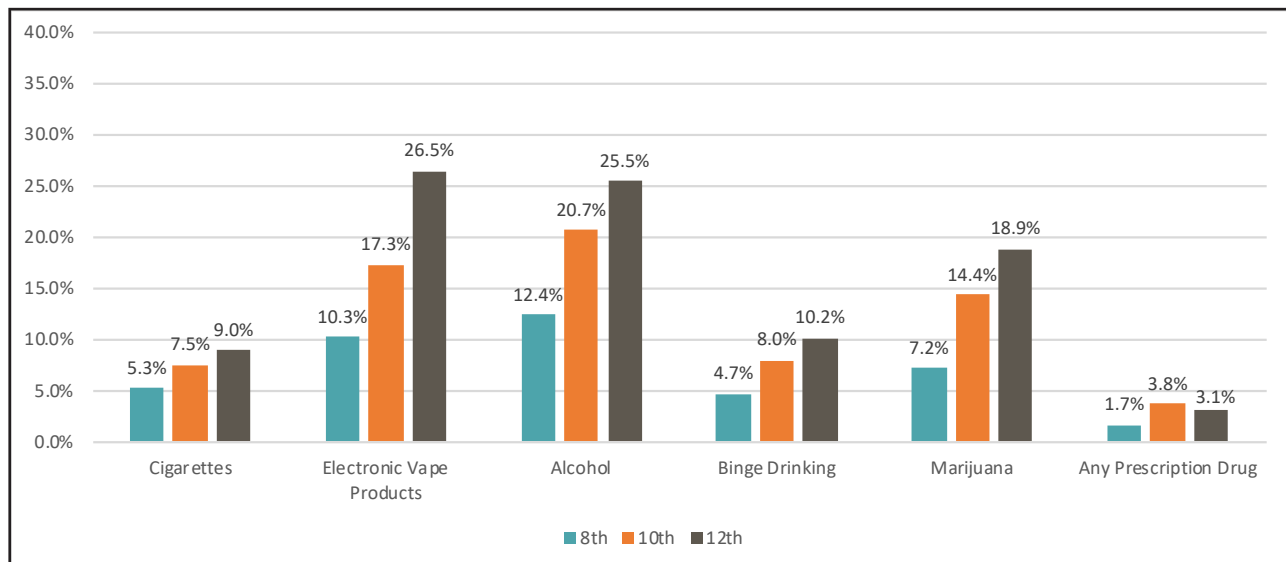
In Central Indiana, the drugs with the highest rate of underage use were alcohol, electronic vape products and marijuana. Among 8th and 12th graders, alcohol was the most commonly used, whereas 10th graders reported the most commonly use drug was electronic vape products.

Figure 3: Past-Month Substance Use in Central Indiana among 8th, 10th, and 12th graders (INYS, 2018)



In East Indiana, the drugs most often used were alcohol, electronic vape products, and marijuana. Among 8th and 10th graders, the most commonly used substance was alcohol, while 12th graders had higher rates of electronic vape products than other substances. The cigarette smoking rate for 8th graders (5.3%) was tied with Northeast Indiana's rate as the highest of any of the state's regions. Generally, trends of substance use in Indiana indicated that as grade level increased, prevalence of substance use also increased. However, the prevalence of misusing prescription drugs was higher in 10th graders than 12th graders.

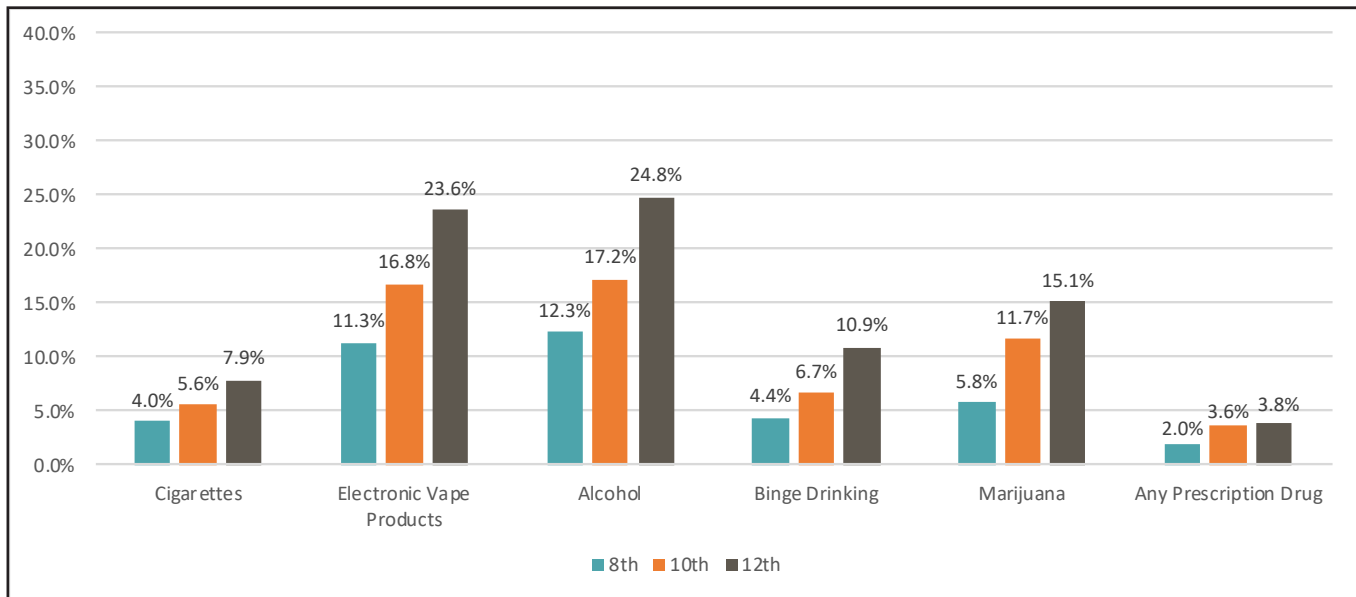
Figure 4: Past-Month Substance Use in East Indiana among 8th, 10th, and 12th graders (INYS, 2018)





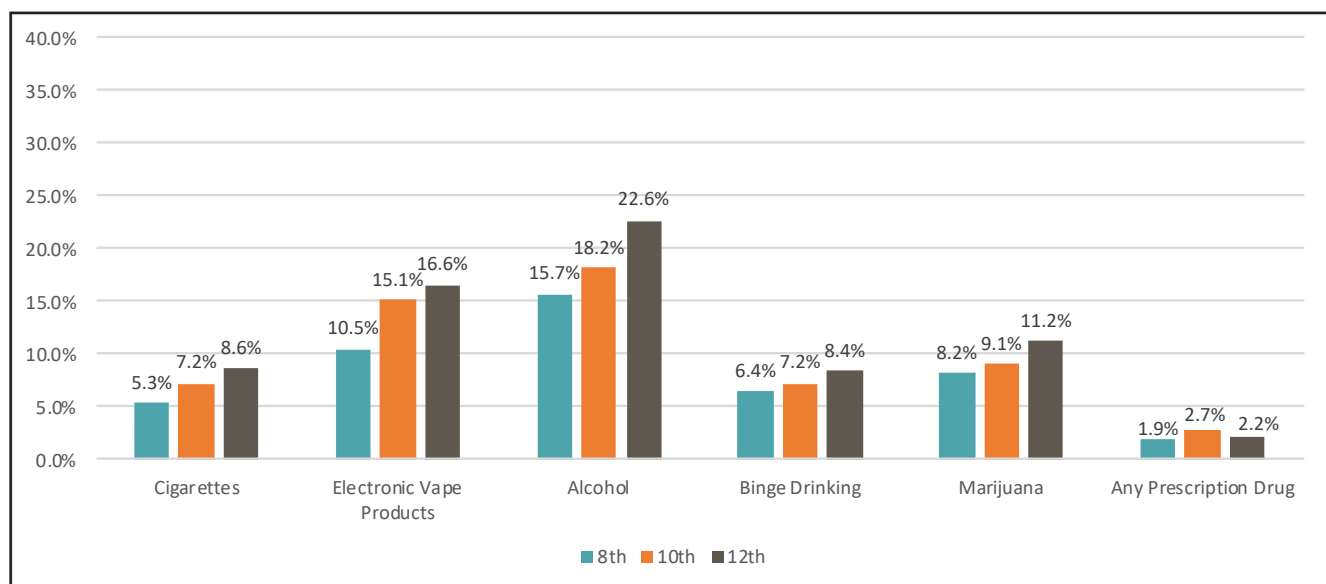
In North Central Indiana, the most often used drugs among all grade levels were alcohol, electronic vape products, and marijuana.

Figure 5: Past-Month Substance Use in North Central Indiana among 8th, 10th, and 12th graders (INYS, 2018)



In Northeast Indiana, all grades reported that alcohol, followed by electronic vape products, and marijuana, were the most prevalent drugs of choice. 8th graders had the highest rates of alcohol use (15.7%), binge drinking (6.4%), and marijuana use (8.2%) than any other region in the state. The cigarette smoking rate for 8th graders (5.3%) was tied with Eastern Indiana as the highest rate within Indiana. Misuse of prescription drugs was slightly higher among 10th graders than 12th graders.

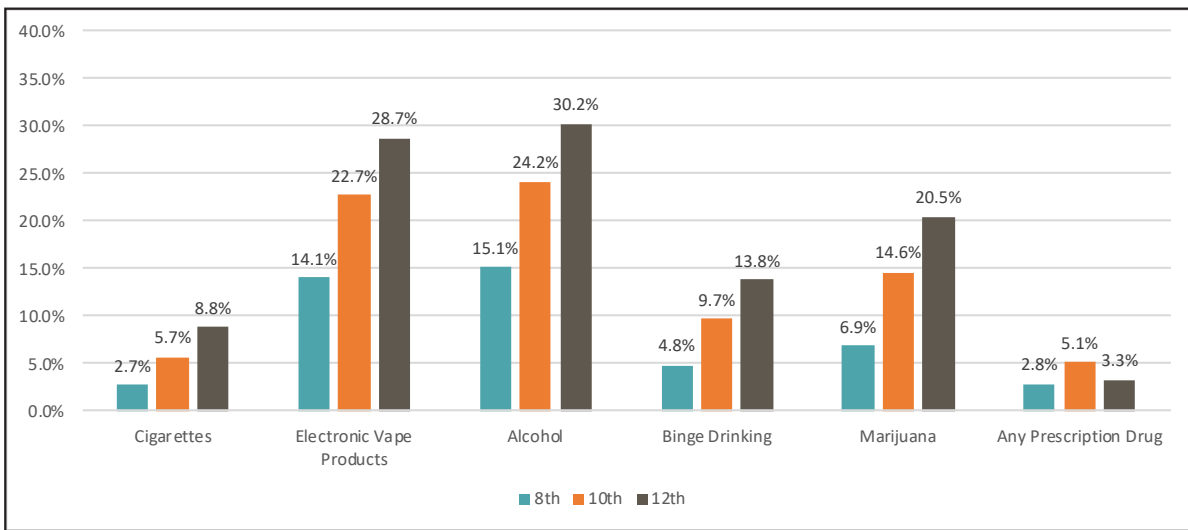
Figure 6: Past-Month Substance Use in Northeast Indiana among 8th, 10th, and 12th graders (INYS, 2018)





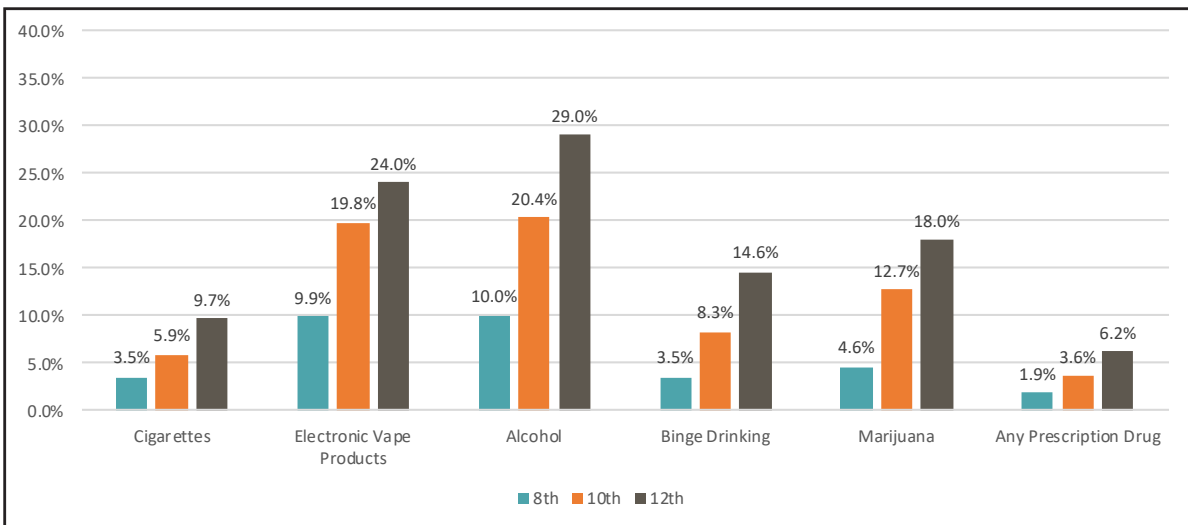
In Northwest Indiana, the most commonly used substances among all grade levels were alcohol, electronic vape products, and marijuana. 8th graders in the Northwest region had the highest rate of prescription drug misuse (2.8%) compared to other regions. 10th graders in Northwestern Indiana had the highest rates of alcohol use (24.2%), marijuana use (14.6%), and prescription drug misuse (5.1%), when compared to their peers in other regions. 12th graders in Northwestern Indiana have the highest rates of marijuana use (20.5%). Use of any prescription drug was slightly higher among 10th graders than 12th graders.

Figure 7: Past-Month Substance Use in Northwest Indiana among 8th, 10th, and 12th graders (INYS, 2018)



In Western Indiana, the most commonly used substance for all age groups was alcohol, followed by electronic vape products and marijuana for each grade level.

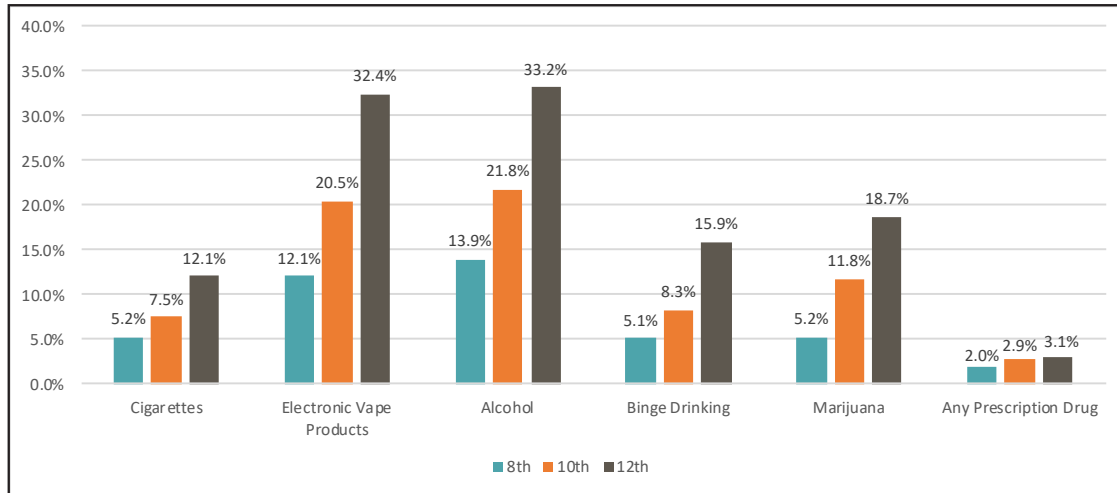
Figure 8: Past-Month Substance Use in West Indiana among 8th, 10th, and 12th graders (INYS, 2018)





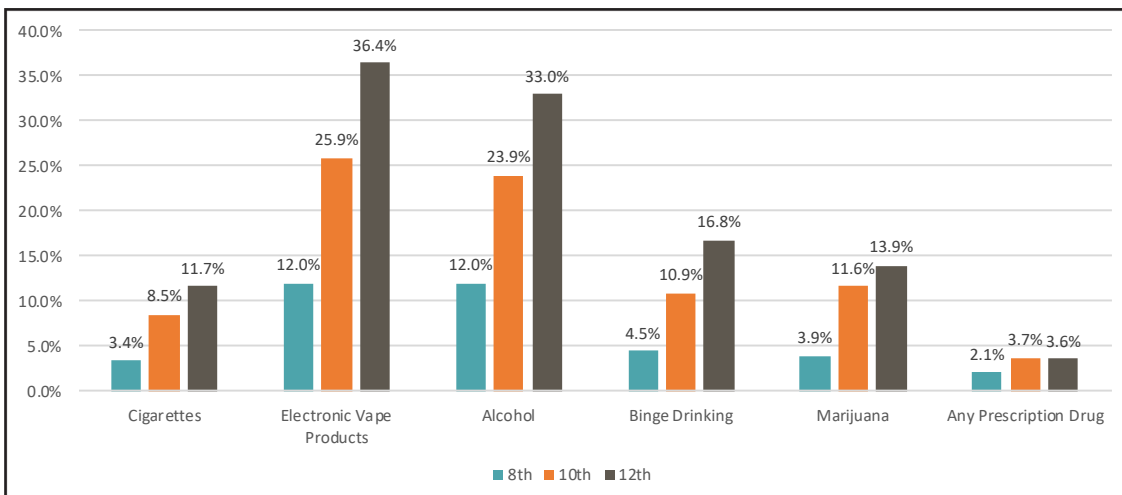
In Southeast Indiana, the most commonly used product among all grade levels was alcohol, followed by electronic vape products. Marijuana was the third most commonly used substance among all grade levels, but among 8th graders, was tied with cigarette use. Compared to their peers in other regions, 12th graders had the highest rates of alcohol use (33.2%), cigarette use (12.1%), and prescription drug misuse (6.2%) in Indiana.

Figure 9: Past-Month Substance Use in Southeast Indiana among 8th, 10th, and 12th graders (INYS, 2018)



In Southwest Indiana, the top three substances used for all grades were electronic vape products, alcohol, and marijuana. Unlike other regions, as well as Indiana as a whole, all grade levels were most commonly using electronic vape products more than alcohol and marijuana. 10th graders in Southwest Indiana have the highest rate of alcohol use (23.9%), binge drinking (10.9%), cigarette use (8.5%), and electronic vape use (25.9%) of any region. 12th graders in Southwest Indiana had the highest rate of binge drinking (16.8%) and electronic vape use (36.4%) of any region.

Figure 10: Past-Month Substance Use in Southwest Indiana among 8th, 10th, and 12th graders (INYS, 2018)





Conclusion

Substance misuse has always been a public health concern, affecting a variety of populations. Opioid misuse is clearly a problem that affects Hoosiers from many walks of life and dominates the media. As evidenced by the data, opioid misuse in Indiana is on the rise among various populations. However, not all populations are affected to the same extent. There are many regional differences when addressing substance use disorders, and different age groups have differing substance misuse prevalence rates.

When trying to remedy the issue of substance misuse, policy makers must take into account the needs of the community they are trying to address. Regional differences are often compounded by the types of communities located within. Rural and urban communities differ in prevalence and type of substance abuse, factors which must be considered when creating interventions. In addition, rural areas may not have the resources and facilities to provide treatment for those seeking help to combat substance addiction [5].

In addition to examining regional differences, there are differences among age groups. The use of e-cigarette products, or “vapes”, have become

increasingly popular among teenagers and young adults. In November of 2018, the National Youth Tobacco Survey (NYTS) reported that over 3.6 million middle and high school students reported using e-cigarettes within the past 30 days, an increase of 1.5 million students when compared to 2017. This has led to several proposed interventions, and a partial ban on flavored e-cigarettes by the FDA [6].

Among Indiana youth, alcohol use and e-cigarette use were reported to be the top two substances of use. Interventions to address youth substance misuse should prioritize underage drinking and e-cigarette use, possibly differing from the most prevalent problems in the adult population of the same region. Traditionally, drug interventions aimed at students have been school-based interventions, given that the majority of the adolescent population attend school for significant periods of time. Recent reviews found that many school-based interventions aimed at reducing use of adolescent tobacco, alcohol and illicit substance use were not very effective, and any solely information-based campaigns showed no effect at all. Interventions which showed the most promise were psychosocial in nature, especially those aimed at promoting mental health [7].



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